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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/041,761	YOON ET AL.
	Examiner	Art Unit	
	Hung Q. Dang	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *19 April 2007*.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-33* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *10 January 2002* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/19/2007 has been entered.

Response to Arguments

Applicant's arguments filed 03/19/2007 have been fully considered but they are not persuasive.

At pages11-12, regarding the rejection of claim 1, Applicant argues that Ando does not disclose the specific structure of the second SOBU, which includes a second application packet, an end of which represents an end of the SOB, and a stuffing packet in which the second ATS is copied and in which a payload is recorded.

In response, the Examiner respectfully disagrees. In Fig. 1, Ando discloses the specific structure of a SOBU (stream block #1), the end of which is illustrated as "Data Area 23" (Fig. 1c) located at the very end of the last ECC block of the SOBU (ECC Block #β). This SOBU obviously includes a second application packet (transport packet f in Fig. 1b), an end of which represents an end of the SOBU marked by End Code 31, and a padding area, which is a stuffing packet in which the second ATS is copied

(column 36, lines 48-51) and in which a payload is recorded containing zeroes (column 36, lines 41-44).

It is noted that the description of ECC Block #β of Stream Block #1 above can also be applied to ECC Block #ε of the Stream Block #2, which is the last SOBU of the SOB, making the second application packet (ECC Block #ε 's version of the Transport Packet f of ECC Block #β) represent an end of the SOB because it represents an end of the last SOBU of the SOB.

For that reason, it can be safely concluded that Ando clearly disclose the limitation of "the second SOBU including a second application packet, an end of which represents an end of the SOB, and a stuffing packet in which the second ATS is copied and in which a payload is recorded."

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a

computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1-14 define control information embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed control information can range form paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Ando et al. (U.S. Patent 6,373,803), which has an effective priority date of parent U.S. application No. 09/660,556 filed on September 12th, 2000, which fully discloses the claimed invention.

Claim 1 recites a recording medium on which content stream data is recorded, comprising: A Stream Object (SOB) formed with first and second Stream Object Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB, and a stuffing packet in which the second ATS is copied and in which a payload is recorded.

Ando et al. anticipate a stream data generation method; hence, a recording medium on which the stream data is recorded, comprising: A Stream Object (SOB) formed with first and second Stream Object Units (SOBUs) (Figs. 1e-1g, column 11, lines 19-20; column 7, lines 32-38), the first SOBU including first and second application time stamps (ATS) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream data is packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4, lines 14-16, 19-20), and the second SOBU including a second application packet (Fig. 1e, 1d, 1b, 1a),

and end of which represents an end of the SOB (Fig. 1e, 1d, 1b, 1a; "Stream Block #2";

"ECC Block #ε"'s version of "Transport Packet f"), and a stuffing packet in which the

second ATS is copied and in which a payload is recorded (Fig. 1e, 1d, 1b, 1a; "Stream

Block #2"; "ECC Block #ε"'s version of "Padding Area 36"; column 36, lines 48-51;

column 36, lines 41-44).

Claim 6 recites a recording medium on which content stream data is recorded,

comprising a Stream Object (SOB) formed with first, second, and third Stream Object

Units (SOBUs) the first SOBU including first and second application time stamps (ATSs)

that indicate reproducing time information of the SOBU as well as a first application

packet disposed between the first and second ATS in which a portion of the content

stream is packed, and the second SOBU including a second application packet, an end

of which represents an end of the SOB, and a stuffing packet in which the second ATS

is copied and in which a payload is recorded, and the third SOBU including stuffing

packets for correction including an ATS.

Ando et al. anticipate a stream data generation method; hence, a recording

medium on which the stream data is recorded, comprising: A Stream Object (SOB)

formed with first, second, and third Stream Object Units (SOBUs) (Figs. 1e-1g, column

11, lines 19-20; column 7, lines 32-38; Fig. 4), the first SOBU including first and second

application time stamps (ATS) that indicate reproducing time information of the SOBU

as well as a first application packet disposed between the first and second ATS in which

a portion of the content stream data is packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4,

lines 14-16, 19-20), the second SOBU including a second application packet (Fig. 1e,

1d, 1b, 1a), and end of which represents an end of the SOB (Fig. 1e, 1d, 1b, 1a;

"Stream Block #2"; "ECC Block #ε"'s version of "Transport Packet f"), and a stuffing

packet in which the second ATS is copied and in which a payload is recorded (Fig. 1e,

1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s version of "Padding Area 36"; column

36, lines 48-51; column 36, lines 41-44), and the third SOBU including stuffing packets

for correction including an ATS (column 36, lines 49-54).

      Claim 15 recites a recording apparatus to record content stream data as a

Stream Object (SOB) formed with at least one Stream Object Unit (SOBU) having a

predetermined size and one or more stream packs, each of the stream packs having an.

Application Time Stamp indicating reproducing time information and an application

packet in which content stream data is packed, the recording apparatus comprising: (1)

a control unit that generates a mapping list as search information; (2) a clock generation

unit that generates a clock value; (3) a buffer unit that attaches the clock value provided

from said clock generating unit to received content stream data, and outputs the

received content stream data by buffering the content stream data; (4) a stream object

unit (SOBU) generating unit to generate first and second Stream Object Units (SOBUs),

the first SOBU including first and second application time stamps (ATSs) that indicate

reproducing time information of the SOBU, and a first application packet disposed

between the first and second ATS in which a portion of the content stream is packed,

and the second SOBU including a second application packet, an end of which

represents an end of the SOB, and a stuffing packet in which the second ATS is copied

and in which a payload is recorded; (5) and a recording unit which records the SOBUS

generated by said SOBU generating unit and the mapping list generated by said control

unit.

Ando et al. anticipate a recording apparatus (column 13, lines 24-26) to record

content stream data as a Stream Object (SOB) formed with at least one Stream Object

Unit (SOBU) (Figs. 1e-1g, column 11, lines 19-20) having a predetermined size (column

7, lines 36-38; column 10, lines 61-67) and one or more stream packs (column 4, lines

16-18; column 7, lines 34-35, 39), each of the stream packs having one or more

transport packet/application packet (column 4, lines 14-16) having an Application Time

Stamp indicating reproducing time information (column 4, lines 19-20) and an

application packet in which content stream data is packed (column 4, lines 14-16), the

recording apparatus comprising: (1) a control unit (main MPU) that generates a SOBI,

which contains a mapping list as search information (column 10, lines 35-38; column 26,

lines 38-41); (2) a clock generation unit that generates a clock value (column 20, lines

46-48; column 24, lines 1-8); (3) a buffer unit that attaches the clock value provided

from said clock generating unit to received content stream data, and outputs the

received content stream data by buffering the content stream data (column 20, lines 46-

51); (4) a formatter, which is the stream object unit (SOBU) generating unit first and

second Stream Object Units (SOBUs) (Figs. 1e-1g, column 11, lines 19-20; column 7,

lines 32-38), the first SOBU including first and second application time stamps (ATS)

that indicate reproducing time information of the SOBU, and a first application packet

disposed between the first and second ATS in which a portion of the content stream

data is packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4, lines 14-16, 19-20), and the

second SOBU including a second application packet (Fig. 1e, 1d, 1b, 1a), and end of

which represents an end of the SOB (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC

Block #ε"'s version of "Transport Packet f"), and a stuffing packet in which the second

ATS is copied and in which a payload is recorded (Fig. 1e, 1d, 1b, 1a; "Stream Block

#2"; "ECC Block #ε"'s version of "Padding Area 36"; column 36, lines 48-51; column 36,

lines 41-44); (5) and a recording unit which records the SOBUs generated by said

SOBU generating unit and the mapping list generated by said control unit (column 14,

lines 63-67; column 15, lines 1-11, column 21, lines 60-65).

Claim 20 recites a recording apparatus for recording content stream data as a

Stream Object (SOB) formed with at least one Stream Object Unit (SOBU) having a

predetermined size, the recording apparatus comprising: (1) a control unit that

generates a mapping list as search information; (2) a clock generation unit that

generates a clock value; (3) a buffer unit attaching the clock value provided from said

clock generating unit to received content stream data, and outputting the received

content stream data by buffering the content stream data; (4) a stream object unit

(SOBU) generating unit to generate first, second, and third Stream Object Units

(SOBUs) the first SOBU including first and second application time stamps (ATSs) that

indicate reproducing time information of the SOBU as well as a first application packet

disposed between the first and second ATS in which a portion of the content stream is

packed, and the second SOBU including a second application packet, an end of which

represents an end of the SOB, and a stuffing packet in which the second ATS is copied

and in which a payload is recorded, and the third SOBU including stuffing packets for

correction including an ATS; and (5) a recording unit which records the SOBUs

generated by said SOBU generating unit and the mapping list generated by said control

unit.

Ando et al. anticipate a recording apparatus for recording content stream data as

a Stream Object (SOB) formed with at least one Stream Object Unit (SOBU) (Figs. 1e-

1g, column 11, lines 19-20) having a predetermined size (column 7, lines 36-38; column

10, lines 61-67), the recording apparatus comprising: (1) a control unit (main MPU) that

generates a SOBI, which contains a mapping list as search information (column 10,

lines 35-38; column 26, lines 38-41); (2) a clock generation unit that generates a clock

value (column 20, lines 46-48; column 24, lines 1-8); (3) a buffer unit attaching the clock

value provided from said clock generating unit to received content stream data, and

outputting the received content stream data by buffering the content stream data

(column 20, lines 46-51); (4) a formatter, which is stream object unit (SOBU) generating

unit (column 14, lines 57-62) to generate first, second, and third Stream Object Units

(SOBUs) (Figs. 1e-1g, column 11, lines 19-20; column 7, lines 32-38; Fig. 4), the first

SOBU including first and second application time stamps (ATS) that indicate

reproducing time information of the SOBU as well as a first application packet disposed

between the first and second ATS in which a portion of the content stream data is

packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4, lines 14-16, 19-20), the second SOBU

including a second application packet (Fig. 1e, 1d, 1b, 1a), and end of which represents

an end of the SOB (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s version of

"Transport Packet f"), and a stuffing packet in which the second ATS is copied and in

which a payload is recorded (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s version of "Padding Area 36"; column 36, lines 48-51; column 36, lines 41-44), and the third SOBU including stuffing packets for correction including an ATS (column 36, lines 49-54); and (5) a recording unit which records the SOBUs generated by said SOBU generating unit and the mapping list generated by said control unit (column 14, lines 63-67; column 15, lines 1-11, column 21, lines 60-65).

Claim 27 recites a recording apparatus to record Stream Object (SOB) formed with first and second Stream Object Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, the recording apparatus comprising: (1) a clock generation unit to generate a clock value; (2) a buffer unit to attach the clock value provided from said clock generating unit to received content stream data, and to output the received content stream data; (3) a stream object unit (SOBU) generating unit to generate SOBUS by packing the received content stream data output from said buffer unit; (4) a control unit to generate a mapping list as search information by regarding a last one of the SOBUS which has no corresponding ATS as having a virtual ATS; and (5) a recording unit to record the SOBUS generated by said SOBU generating unit and the mapping list generated by said control unit.

Ando et al. anticipate a recording apparatus (column 13, lines 24-26) to record a

Stream Object (SOB) formed with first and second Stream Object Units (SOBUs) (Figs.

1e-1g, column 11, lines 19-20; column 7, lines 32-38), the first SOBU including first and

second application time stamps (ATS) that indicate reproducing time information of the

SOBU, and a first application packet disposed between the first and second ATS in

which a portion of the content stream data is packed (Fig. 1f, 1e, 1c, 1b, and 1a; column

4, lines 14-16, 19-20), and the second SOBU including a second application packet

(Fig. 1e, 1d, 1b, 1a), and end of which represents an end of the SOB (Fig. 1e, 1d, 1b,

1a; "Stream Block #2"; "ECC Block #ε"'s version of "Transport Packet f"), and a stuffing

packet in which the second ATS is copied and in which a payload is recorded (Fig. 1e,

1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s version of "Padding Area 36"; column

36, lines 48-51; column 36, lines 41-44), the recording apparatus comprising: (1) a clock

generation unit to generate a clock value (column 20, lines 46-48; column 24, lines 1-8);

(2) a buffer unit to attach the clock value provided from said clock generating unit to

received content stream data, and to output the received content stream data (column

20, lines 46-51); (3) a formatter, which is a stream object unit (SOBU) generating unit to

generate SOBUs by packing the received content stream data output from said buffer

unit (column 14, lines 57-62); (4) a main MPU, which is the control unit, to generate a

SOBI, which contains a mapping list as search information (column 10, lines 35-38;

column 26, lines 38-41) by regarding a last one of the SOBUs which has no

corresponding ATS as having a virtual ATS (column 36, lines 48-54); and (5) a

recording unit to record the SOBUS generated by said SOBU generating unit and the

mapping list generated by said control unit (column 14, lines 63-67; column 15, lines 1-11, column 21, lines 60-65).

Claim 28 recites the control unit generating a mapping list (column 26, lines 46-56) having an incremental application packet arrival time (IAPAT) obtained by regarding a last application packet included in the SOB as having a virtual ATS.

Ando et al. anticipate the control unit generating a mapping list having an incremental application packet arrival time (IAPAT) (column 11, lines 36-43, fig. 5; column 22, lines 4-8) obtained by regarding a last application packet included in the SOB as having a virtual ATS (column 36, lines 29-35, lines 48-54).

Claim 29 recites a reproducing apparatus to reproduce content stream data from a recording medium on which content stream data is recorded as a Stream Object (SOB) formed with first, second, and third Stream Object Units (SOBUs) the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU as well as a first application packet disposed between the first and second ATS in which a portion of the content stream is packed, and the second SOBU including a second application packet, an end of which represents an end of the SOB, and a stuffing packet in which the second ATS is copied and in which a payload is recorded, and the third SOBU including stuffing packets for correction including an ATS, the reproducing apparatus comprising: a reading unit to read a mapping list as search information and a corresponding SOBU, where the mapping list has search information generated by regarding the last SOBU as an SOBU having a virtual ATS; a control unit to control the reading unit to read the corresponding SOBU, referring to the mapping list

read by the reading unit; a clock generating unit to generate a clock value; an SOBU

analyzing unit to extract content stream data by analyzing the SOBU read by said

reading unit; and a buffering unit to output the content stream data from the SOBU

analyzing unit by buffering the content stream data based on a clock value provided by

said clock generating unit.

Ando et al. anticipate a reproducing apparatus (column 13, lines 24-26) to

reproduce content stream data from a recording medium on which content stream data

is recorded as a Stream Object (SOB) formed with first, second, and third Stream

Object Units (SOBUs) (Figs. 1e-1g, column 11, lines 19-20; column 7, lines 32-38; Fig.

4), the first SOBU including first and second application time stamps (ATS) that indicate

reproducing time information of the SOBU as well as a first application packet disposed

between the first and second ATS in which a portion of the content stream data is

packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4, lines 14-16, 19-20), the second SOBU

including a second application packet (Fig. 1e, 1d, 1b, 1a), and end of which represents

an end of the SOB (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s version of

"Transport Packet f"), and a stuffing packet in which the second ATS is copied and in

which a payload is recorded (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC Block #ε"'s

version of "Padding Area 36"; column 36, lines 48-51; column 36, lines 41-44), and the

third SOBU including stuffing packets for correction including an ATS (column 36, lines

49-54), the reproducing apparatus comprising: (1) a stream data playback controller,

which is a reading unit, to read a mapping list as search information and a

corresponding SOBU, where the mapping list has search information (column 22, lines

33-37; 44-56) generated by regarding the last SOBU as an SOBU having a virtual ATS

(column 36, lines 29-35, lines 48-54); (2) a main MPU, which is a control unit, to control

the reading unit to read the corresponding SOBU, referring to the mapping list read by

the reading unit (column 22, lines 33-41); (3) a clock generating unit to generate a clock

value (column 20, lines 46-48; column 24, lines 1-8); (4) an separator, which is a SOBU

analyzing unit, to extract content stream data by analyzing the SOBU read by said

reading unit (column 23, lines 23-29); and (5) a buffering unit to output the content

stream data from the SOBU analyzing unit by buffering the content stream data based

on a clock value provided by said clock generating unit (column 20, lines 46-51).

Claim 21 recites all SOBUs, excluding a last SOBU, have at least two entire

ATSs, which is anticipated by Ando et al. (column 17, lines 5-8; column 20, lines 57-59).

Claim 22 recites said SOBU generating unit including a stuffing packet for

correction in the last SOBU, which is anticipated by Ando et al. (column 20, lines 60-62).

Claims 7 and 23 recite the stuffing packet for correction is recorded continuously

after a last application packet included in the SOB, which is clearly anticipated by Ando

et al. (column 34, lines 25-26).

Claim 8 and 24 recite the predetermined ATS included in the stuffing packet for

correction has the same value as an ATS included in the last stream pack, which is

anticipated by Ando et al. (column 36, lines 49-51).

Claims 9, 25 and 10, 26 recite the stuffing packet for correction further includes a

payload in which predetermined data is recorded or no data is recorded, and a "0" is

recorded respectively, which is anticipated by Ando et al. (column 36, lines 23-26).

Claims 2, 11, and 16 recite the size of the application packets is small enough so that the SOBUs, excluding the last SOBU, includes at least two entire ATS, which is clearly anticipated by Ando et al. (column 17, lines 5-8; column 20, lines 57-59).

Claim 3, 12, 17 and 4, 13, 18 recite the size of the application packet satisfies the equation: $AP\_PKT\_SZ \le SPayload\_SZ \times \{SOBU\_SZ/2\} - \{cell((N\_AHE + N\_SByte)/2) + ATS\_SZ\}$; and

$AP\_PKT\_SZ \le 2018 \times \{SOBU\_SZ\} - 6$, respectively

where AP_PKT_SZ denotes the size of the application packet, ATS_SZ denotes a size of an ATS which is formed in units of bytes, $SOBU\_SZ$ denotes a size of an SOBU, $SPayload\_SZ$ denotes a size of a data space containing information excluding a fixed header area of a stream pack, N_AHE denotes a number of application header extensions of a corresponding SOBU, and N_SByte denotes a number of stuffing bytes of a corresponding SOBU.

Ando et al. anticipate the size of a stream pack or sector being 2048 bytes (Fig. 26; column 17, line 5) and each of the data area, after various header sizes are subtracted, can record approximately 10 transport packets (or application packets) (column 17, lines 5-8), each of which having an application time stamp (ATS) at its head position (column 33, lines 65-67). Based on this anticipation, the following condition is established:

$10 \times (AP\_PKT\_SIZE + ATS) \le 2027$, or equivalent

$AP\_PKT\_SZ \le 2027 - 10$ ATS.

Under this observation, the claimed range obviously overlap the range disclosed by Ando et al., thus is anticipated (MPEP 2131.03).

Claims 5, 14, 19, and 30 recite a MAPping List (MAPL) having an Incremental Application Packet Arrival Time (IAPAT) indicating a duration of the corresponding SOBU as search information indicating which of the SOBUs are included in a corresponding SOB.

Ando et al. anticipate a MAPping List (MAPL) (column 26, lines 46-56) having an Incremental Application Packet Arrival Time (IAPAT) indicating a duration of the corresponding SOBU (column 11, lines 36-43, fig. 5; column 22, lines 4-8) as search information indicating which of the SOBUs are included in a corresponding SOB (column 22, lines 42-56).

Claim 31 recites the predetermined ATS included in the stuffing packet for correction has the same value as an ATS included in the last stream pack of the SOBUs, which is anticipated by Ando et al. (column 36, lines 49-51).

Claim 32 recites the stuffing packet for correction further includes a payload in which predetermined data is recorded or no data is recorded, which is anticipated by Ando et al. (column 36, lines 23-26).

Claim 33 recites an apparatus comprising: (1) a recording apparatus to record a Stream Object (SOB) formed with first and second Stream Object Units (SOBUs), the first SOBU including first and second application time stamps (ATSs) that indicate reproducing time information of the SOBU, and a first application packet disposed between the first and second ATS in which a portion of the content stream is packed,

and the second SOBU including a second application packet, an end of which

represents an end of the SOB, and a stuffing packet in which the second ATS is copied

and in which a payload is recorded, said recording apparatus including: (1) a recording

control unit to generate a mapping list as search information; (2) a clock generation unit

to generate a clock value; (3) a buffer unit to buffer input content stream data, to add the

clock value provided by the clock generation unit to the input content stream data, and

to output a result; (4) a Stream Object Unit (SOBU) generating unit to generate the

SOBUs, each of the SOBUs, excluding a last one of the SOBUs and SOBUs having

stuffing packets, includes at least two entire ATSs; and (5) a recording unit to record the

plurality of generated SOBUS and the mapping list on a recordable recording medium,

and (6) a reproducing apparatus to reproduce data from a reproduceable recording

medium, the reproducing apparatus including: (i) a reading unit to read the mapping list

as search information; and (ii) a reproducing control unit to search for a corresponding

SOBU by referring to a generated search information and regarding a value of the

predetermined application time stamp as the value of an application time stamp for the

last one of the SOBUS in the stream object when referring to the read mapping list.

Ando et al. anticipate an apparatus comprising: (1) a recording apparatus

(column 13, lines 24-26) to record a Stream Object (SOB) formed with first and second

Stream Object Units (SOBUs) (Figs. 1e-1g, column 11, lines 19-20; column 7, lines 32-

38), the first SOBU including first and second application time stamps (ATS) that

indicate reproducing time information of the SOBU, and a first application packet

disposed between the first and second ATS in which a portion of the content stream

data is packed (Fig. 1f, 1e, 1c, 1b, and 1a; column 4, lines 14-16, 19-20), and the

second SOBU including a second application packet (Fig. 1e, 1d, 1b, 1a), and end of

which represents an end of the SOB (Fig. 1e, 1d, 1b, 1a; "Stream Block #2"; "ECC

Block #ε"'s version of "Transport Packet f"), and a stuffing packet in which the second

ATS is copied and in which a payload is recorded (Fig. 1e, 1d, 1b, 1a; "Stream Block

#2"; "ECC Block #ε"'s version of "Padding Area 36"; column 36, lines 48-51; column 36,

lines 41-44), said recording apparatus including: (1) a recording control unit to generate

a mapping list as search information (column 10, lines 35-38; column 26, lines 38-41);

(2) a clock generation unit to generate a clock value (column 20, lines 46-48; column

24, lines 1-8); (3) a buffer unit to buffer input content stream data, to add the clock value

provided by the clock generation unit to the input content stream data, and to output a

result (column 20, lines 46-51); (4) a formatter, which is a Stream Object Unit (SOBU),

generating unit to generate the SOBUs (column 14, lines 57-62), each of the SOBUs,

excluding a last one of the SOBUs and SOBUs having stuffing packets, includes at least

two entire ATSs (column 17, lines 5-8; column 20, lines 57-59); and (5) a recording unit

to record the plurality of generated SOBUS and the mapping list on a recordable

recording medium (column 14, lines 63-67; column 15, lines 1-11; column 21, lines 60-

65), and (6) a reproducing apparatus (column 13, lines 24-26) to reproduce data from a

reproduceable recording medium, the reproducing apparatus including: (i) a stream data

playback controller, which is a reading unit, to read the mapping list as search

information (column 22, lines 33-37, 44-56); and (ii) a reproducing control unit to search

for a corresponding SOBU by referring to a generated search information (column 22,

lines 33-56) and regarding a value of the predetermined application time stamp as the

value of an application time stamp for the last one of the SOBUs in the stream object

when referring to the read mapping list (column 36, lines 48-54).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hung Q. Dang whose telephone number is 571-270-

1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

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